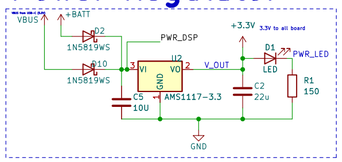
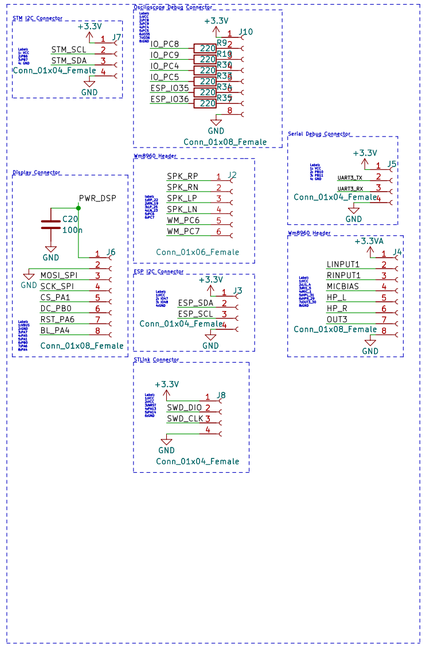
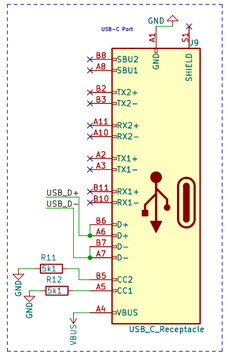
Power Regulator



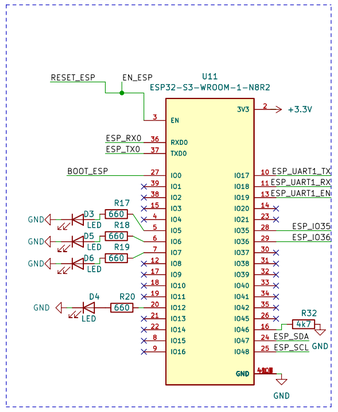
Connectors



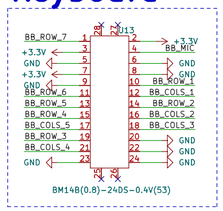
USB-C



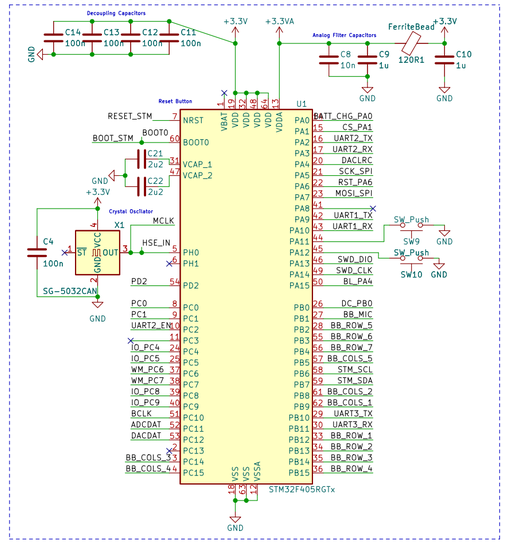
ESP32 WIFI



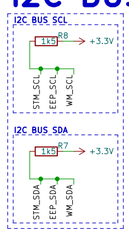
Keyboard



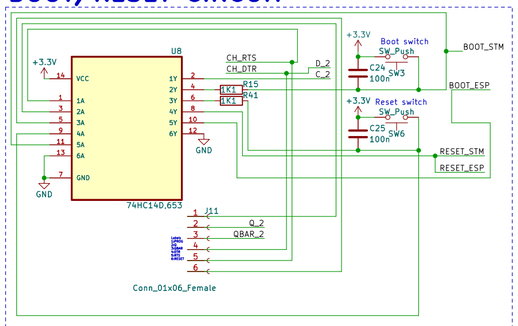
Main CPU



I2C BUS



BOOT/RESET CIRCUIT



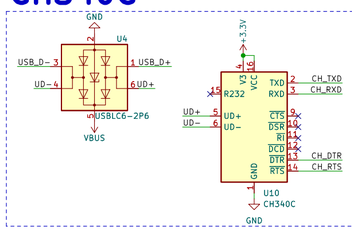
NOTES:
-BOOT_STM goes out to BOOT0 pin on STM
-RESET_STM goes out to NRST pin on STM
-BOOT_ESP goes out to IO0 on ESP
-RESET_ESP goes out to EN on ESP
For the following 4 pins above, the existing circuits connected to each of these pins would then be replaced if this circuit is correct.

-CH_RTS goes out from RTS pin on CH340C
-CH_DTR goes out from DTR pin on CH340C

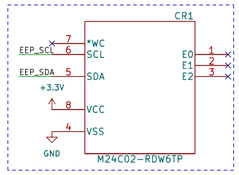
-C_2 goes out to Reset2 pin on CD4013BM
-D_2 goes out to D2 pin on CD4013BM
-Q_2 and QBAR_2 go to Q2 and QBAR2 pin on CD4013BM respectively

-The 8 pin connector would then replace the CH304G existing 4 pin connector

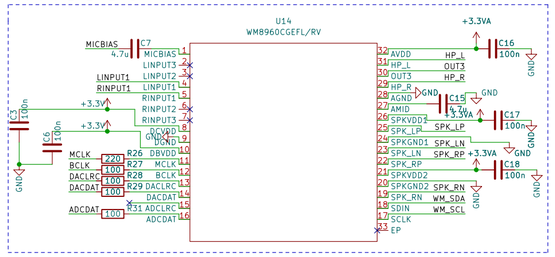
CH340G



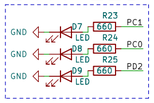
EEPROM



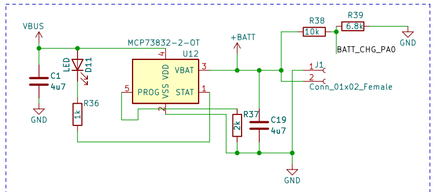
WM8960



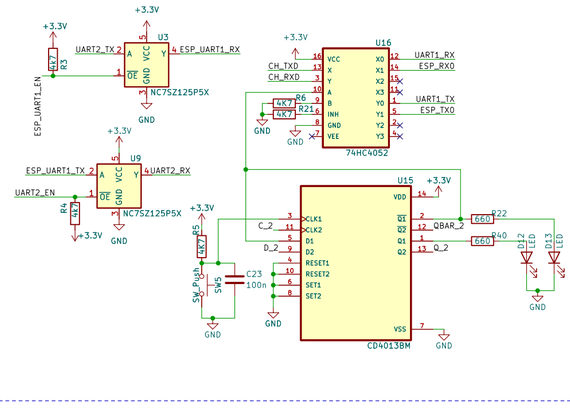
STM LED



BATT CHIP



Serial Switch Relay



I2C Addresses

EEPROM:
-EEP_SCL(6)
-EEP_SDA(5)

WM8960:
-WM_SDA(18)
-WM_CLK(17)

ESP32:
-ESP_SDA(24)
-ESP_SCL(25)

STM32:
-PB6(58) STM_SCL
-PB7(59) STM_SDA

I2S Bus STM32:

-I2S2_ext_SD(10) -> BCLK
-I2S2_SD(11) -> DACLRC
-I2S3_SD(53) -> ADCDAT
-I2S3_ext_SD(52) -> ADCLRC
-I2S3_CK(51) -> DACDAT

Power Usage

Serial Lines

CH340N:
-CH_RXD(7) SWITCH RELAY
-CH_TXD(8) SWITCH RELAY

STM32:
-UART1_TX(37) CONNECTED TO ESP
-UART1_RX(38) CONNECTED TO ESP
-UART2_TX(16) SWITCH RELAY
-UART2_RX(17) SWITCH RELAY
-UART3_TX(29) SERIAL DEBUG CONNECTOR
-UART3_RX(30) SERIAL DEBUG CONNECTOR

ESP32:
-UART1_TX(10) CONNECTED TO STM
-UART1_RX(11) CONNECTED TO STM
-ESP_RXD0(36) SWITCH RELAY
-ESP_TXD0(37) SWITCH RELAY

Notes

CISCO SYSTEMS
Sheet: /
File: EV5 Board Design.kicad_sch

Title: EV4 – FINN BERG

Size: A2	Date: 2023-04-03	**Rev:**
KiCad E.D.A. kicad (6.0.11)		Id: 1/1